

Amendments to the claims:

This listing of the claims will replace all prior versions and listings of the claims in the application:

1. (Currently Amended) A method for separating a metal from a composition including said metal, the method comprising forming an electrolytic cell having an anode, a cathode and an electrolyte, the anode comprising a composition including said metal and the electrolyte comprising an ionic liquid comprising an organic cation component, applying a sufficient potential difference between the anode and the cathode to cause the metal to transfer from the anode to the cathode and be deposited thereon.
- 2-3. (Canceled)
4. (Original) A method according to claim 3 wherein the organic cation includes alkyl groups which are linear or branched and not all of the same chain length.
5. (Currently amended) A method according to claim 1 wherein the electrolytic cell comprises an anion~~anode is~~ selected from a group consisting of halide, nitrate, sulphate, tetrafluoroborate, hexafluorophosphate and tetrachloroaluminate.
6. (Currently amended) A method ~~according to claim 1 wherein the anode~~ comprises for separating a metal from a composition including said metal, the method comprising forming an electrolytic cell having an anode, a cathode and an electrolyte, the anode comprising a composition including said metal and the electrolyte comprising an ionic liquid, applying a sufficient potential difference between the anode and the cathode to cause the metal to transfer from the anode to the cathode and be deposited thereon, wherein the electrolytic cell comprises an trifluoromethanesulfonate bis(trifluoromethanesulfonyl)imide anion component.
7. (Previously presented) A method according to claim 1 wherein the ionic liquid is pre-loaded with metal ions.

8. (Original) A method according to claim 7 wherein the ionic liquid is pre-loaded with metal ions by the addition of a soluble uranium salt.

9. (Original) A method according to claim 7 wherein the ionic liquid is pre-loaded with uranium ions by displacement of a metal chloride.

10. (Previously presented) A method according to claim 9 wherein the metal chloride comprises AgCl or CdCl₂.

11. (Original) A method according to claim 7 wherein the ionic liquid is pre-loaded with uranium ions by destructive reduction of the electrolyte.

12. (Previously presented) A method according to claim 1 further comprising depositing purified metal at the cathode.

13. (Currently amended) A method ~~according to claim 1 further comprising depositing the metal at the cathode~~ for separating a metal from a composition including said metal, the method comprising forming an electrolytic cell having an anode, a cathode and an electrolyte, the anode comprising a composition including said metal and the electrolyte comprising an ionic liquid, applying a sufficient potential difference between the anode and the cathode to cause the metal to transfer from the anode to the cathode and be deposited thereon as a compound.

14. (Previously presented) A method according to claim 1, wherein the composition to be separated is irradiated nuclear fuel.

15. (Previously presented) A method according to claim 1, wherein the metal to be separated comprises uranium.

16. (Previously presented) A method according to claim 1 further comprising purifying the ionic liquid for further use.

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17-20. (Canceled)

21. (Previously presented) A method according to claim 1 wherein the metal to be separated comprises plutonium.

22. (Previously presented) A method according to claim 3 wherein the organic cation is selected from a group consisting of N-substituted pyridinium, N,N'-disubstituted imidazolium, tetraalkylammonium or tetraalkylphosphonium.